

## **Electronic Cigarettes (E-Cigarettes)**

- E-cigarettes are NOT an approved U.S. Food and Drug Administration (FDA) quit tobacco device and should NOT be marketed as such;
- E-cigarettes are NOT a safe alternative to other forms of tobacco;
- The FDA considers e-cigarettes to be a tobacco product and will be regulating them as such;
- E-cigarettes are not currently regulated by the FDA and thus there is no oversight of e-cigarettes, e-hookah, or their associated components or refills to ensure they are safe;
- E-cigarettes may be particularly attractive to youth due to their novelty, because they are sold in places easily accessible to youth, such as mall kiosks and gas stations, and because they are available in flavors appealing to youth, including chocolate, strawberry, peach, or mango; and
- There is currently no regulation at the federal or State of Michigan level prohibiting the sale of e-cigarettes to minors.

### **What is an Electronic Cigarette?**

E-cigarettes are products that allow a user to inhale vapor containing nicotine and other substances. Unlike conventional cigarettes, e-cigarettes are typically composed of a rechargeable, battery-operated heating element, a cartridge that may contain nicotine or other chemicals, and an atomizer that, when heated, converts the contents of the cartridge into a vapor.<sup>1</sup>

### **Electronic Cigarettes are not an FDA-approved quit tobacco device**

There are seven FDA-approved medications to treat tobacco dependence.<sup>2</sup> E-cigarettes are not FDA-approved for quitting tobacco.<sup>3</sup> Tobacco users who want to quit are encouraged to see their health care provider or to call 1-800-QUIT-NOW (1-800-784-8669) to receive evidence-based support in this process.

### **Safety, Regulation and Quality Concerns**

The FDA intends to regulate e-cigarettes as “tobacco products.” In 2009, the FDA tested the ingredients of cartridges from two leading brands of e-cigarettes and found levels of cancer-causing and toxic chemicals, including diethylene glycol, an ingredient in antifreeze.<sup>4</sup> The FDA also found inconsistencies in manufacturing, raising concerns for consumers. In some cases cartridges labeled as containing no nicotine had nicotine.<sup>5,6</sup> Studies suggest adverse health impacts for both user and bystanders (“secondhand vaping”) associated with e-cigarettes, but additional studies are needed to understand the full impact of their use.<sup>7,8,9</sup>

The World Health Organization warns that nicotine exposure, whether through inhalation, ingestion, or skin contact, can be hazardous to the health and safety of children, young people, pregnant women, nursing mothers, people with heart conditions and the elderly.<sup>10</sup> E-cigarette users refilling their own cartridges handle potentially dangerous concentrations of nicotine.<sup>11</sup> The American Association of Poison Control Centers has been tracking adult and child poisonings from e-cigarette components and refill fluids.<sup>12</sup> E-cigarettes also pose consumer safety concerns, having caused fires and injury to users.<sup>13,14,15</sup>

### **Concerns for Youth**

There is no federal age requirement to purchase e-cigarettes, and few states or local jurisdictions have laws prohibiting their sale to minors. In Michigan there is no state law that bars e-cigarette purchases by minors, though retailers as a matter of store policy are free to prohibit sales to minors.

E-cigarette companies aggressively market their product to youth as glamorous, healthy, and rebellious in both traditional and social media, using methods long-prohibited to conventional tobacco companies, such as celebrity endorsements.<sup>16,17,18</sup> Public health authorities are concerned that youth will be attracted to the novelty and flavors in e-cigarettes, and that e-cigarette use will lead to conventional tobacco use. Youth often believe e-cigarettes are safer than conventional tobacco use, and find e-cigarettes easy to conceal around adults.<sup>19,20</sup>

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<sup>1</sup> "FDA Warns of Health Risks Posed by E-Cigarettes." FDA Consumer Health Information, July 2009.

<http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm225210.htm> Accessed 8/9/13.

<sup>2</sup> U.S. Department of Health and Human Services, Public Health Service. Clinical Practice Guideline: Treating Tobacco Use and Dependence: 2008 Update. May 2008. p. v.

<sup>3</sup> U.S. Food and Drug Administration. "FDA Warns of Health Risks Posed by E-Cigarettes." FDA Consumer Health Information, July 2009. <http://www.fda.gov/downloads/forconsumers/consumerupdates/UCM173430.pdf> Accessed 8/9/13.

<sup>4</sup> Ibid.

<sup>5</sup> U.S. Food and Drug Administration, Division of Pharmaceutical Analysis. Evaluation of e-cigarettes. <http://www.fda.gov/downloads/Drugs/ScienceResearch/UCM173250.pdf> 5/4/09. Accessed 5/12/13.

<sup>6</sup> "Tobacco Fact Sheet: Electronic Cigarettes (E-Cigarettes)." Legacy Foundation. June 2013. <http://www.legacyforhealth.org/content/download/582/6926/version/5/file/LEG-FactSheet-eCigarettes-JUNE2013.pdf> Accessed 8/9/13.

<sup>7</sup> Vardavas, C., et al. "Short-term Pulmonary Effects of Using an Electronic Cigarette: Impact on Respiratory Flow Resistance, Impedance, and Exhaled Nitric Oxide." *Chest*. 2012;141(6):1400-1406. <http://journal.publications.chestnet.org/data/Journals/CHEST/24233/112443.pdf> Accessed 8/14/13.

<sup>8</sup> McCauley, L., et al. "An Unexpected Consequence Of Electronic Cigarette Use." *Chest*. 2012;141(4):1110-1113. <http://journal.publications.chestnet.org/data/Journals/CHEST/24314/111334.pdf> Accessed 8/14/13.

<sup>9</sup> Schripp, T., et al. "Does e-cigarette consumption cause passive vaping?" *Indoor Air*. July 2, 2012. <http://onlinelibrary.wiley.com/doi/10.1111/j.1600-0668.2012.00792.x/pdf> Accessed 8/14/13

<sup>10</sup> "Questions and Answers on Electronic Cigarettes or Electronic Nicotine Delivery Systems (ENDS)." World Health Organization. 7/9/13. [http://www.who.int/tobacco/communications/statements/electronic\\_cigarettes/en/index.html](http://www.who.int/tobacco/communications/statements/electronic_cigarettes/en/index.html) Accessed 8/5/13.

<sup>11</sup> "Tobacco Fact Sheet: Electronic Cigarettes (E-Cigarettes)." Legacy Foundation.

<sup>12</sup> Bronstein, Alvin C., MD, et al. "2011 Annual Report of the American Association of Poison Control Centers' National Poison Data System (NPDS): 29<sup>th</sup> Annual Report." *Clinical Toxicology* (2012), 50, 911-1164. [https://aapcc.s3.amazonaws.com/pdfs/annual\\_reports/2011\\_NPDS\\_Annual\\_Report.pdf](https://aapcc.s3.amazonaws.com/pdfs/annual_reports/2011_NPDS_Annual_Report.pdf) Accessed 8/15/13.

<sup>13</sup> "Sherman man's e-cigarette explodes while charging." News 12 KXII.com 7/16/13. <http://www.kxii.com/news/headlines/E-cigarette-explodes-in-Texoma-mans-home-215771641.html#> Accessed 7/17/13.

<sup>14</sup> "Corona: Couple sues over exploding e-cigarette battery." *The Press-Enterprise*. 7/3/13. <http://losangeles.cbslocal.com/2013/07/11/corona-couple-sues-after-e-cigarette-battery-explodes-in-car/> Accessed 7/8/13.

<sup>15</sup> "Electronic cigarette explodes in man's mouth, causes serious injuries." CBS News. 2/16/12. [http://www.cbsnews.com/8301-504763\\_162-57379260-10391704/electronic-cigarette-explodes-in-mans-mouth-causes-serious-injuries/](http://www.cbsnews.com/8301-504763_162-57379260-10391704/electronic-cigarette-explodes-in-mans-mouth-causes-serious-injuries/) Accessed 8/15/13.

<sup>16</sup> "Firms dust off tobacco marketing playbook amid pending regulation of electronic cigarettes." *The Washington Post* (AP). 8/3/13. [http://www.washingtonpost.com/business/firms-dust-off-tobacco-marketing-playbook-amid-pending-regulation-of-electronic-cigarettes/2013/08/03/c3b07d8c-fc3c-11e2-89f7-8599e3f77a67\\_print.html](http://www.washingtonpost.com/business/firms-dust-off-tobacco-marketing-playbook-amid-pending-regulation-of-electronic-cigarettes/2013/08/03/c3b07d8c-fc3c-11e2-89f7-8599e3f77a67_print.html) Accessed 8/3/13.

<sup>17</sup> "FDA and the States Must Regulate E-Cigarettes to Protect Public Health: Our Policy Regarding E-Cigarettes." Campaign for Tobacco-Free Kids. July 17, 2013. <http://tobaccofreecampus.org/sites/default/files/resources/TFK%20E%20cigarettes%20Policy%20Statement%20FINAL%207-17-13.pdf> Accessed 8/2/13.

<sup>18</sup> U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General. *Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General*. p. 549-552. 2012. <http://www.surgeongeneral.gov/library/reports/preventing-youth-tobacco-use/full-report.pdf> Accessed 8/15/13.

<sup>19</sup> "FDA Warns of Health Risks Posed by E-Cigarettes." See citation 1.

<sup>20</sup> Global Advisors Smokefree Policy (GASP). "Electronic Smoking Devices." Updated 8/14/13. [http://www.njgasp.org/E-Cigs\\_White\\_Paper.pdf](http://www.njgasp.org/E-Cigs_White_Paper.pdf) Accessed 8/15/13.